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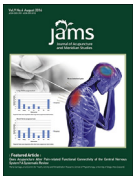

CONFERENCE ABSTRACTS

International Scientific Acupuncture and Meridian Symposium 2015

The following abstracts are in the proceedings of the International Scientific Acupuncture and Meridian Symposium, October 2–4, 2015, University of Otago, Dunedin, New Zealand.

Photobiomodulation: Scientific Basis

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Abstract
The therapeutic benefits of photobiomodulation (PBM) were first reported in the late 1960s. Interest in this therapeutic modality has continued to grow. Recently, there have been important advances in our understanding of: the mechanistic basis of PBM, the basics of light/tissue interaction, light penetration into the body and optimization of treatment parameters. This presentation will include published reports and current research from my and my collaborator's laboratories. The purpose of this presentation will be to review our current understanding of the scientific basis of PBM and highlight important paradigm shifts and controversies surrounding wavelength and output power selection for therapeutic use of light. Additionally the current hypotheses for the mechanistic basis of PBM in acupuncture will be reviewed.

Laser Acupuncture: Scientific Basis

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Abstract
Laser acupuncture refers to the use of laser devices as an alternative to needles for the stimulation of acupuncture points. Such acupuncture spans traditional approaches as well as trigger point treatments. Initial exploratory work was completed in this area in the 1960s, and laser acupuncture has developed in popularity in the intervening years. Apart from increasing numbers of randomised controlled trials of the effectiveness of laser acupuncture in various conditions, research has also developed our understanding of the scientific basis of this modality, including the biophysical basis of light-tissue interaction and biological effects of light relevant to reported clinical benefits.
This presentation will provide an overview of current research findings relevant to our understanding of the scientific basis of laser acupuncture, focusing particularly on laser acupuncture analgesia: the use of laser acupuncture to effect pain relief.

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Electroacupuncture Treatment of Hyperglycemia in Diabetic Rats

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Abstract
Repeated application of electroacupuncture (EA) was investigated for hypoglycemic effect in male obese Zucker fatty diabetic rats 10–17 weeks. Animals in Groups 1–3 were anesthetized with 1% halothane in nitrous oxide:oxygen (3:1) on Days 1, 3, 5, 8, 10 and 12. Those in Group 1 ($n = 4$) did not receive EA (controls); those in Group 2 ($n = 4$) treated with EA using Zhongwan/Guanyuan acupoints; those in Group 3 ($n = 4$) received EA using Zusanli acupoints. After inducing anesthesia, blood glucose (BG) was measured at 10 and 20 minutes and EA applied for 30 minutes when BG was measured again. The means for baseline BG at 20 minutes and the change over 30 minutes for Groups 2 and 3 were compared with Group 1 by ANOVA and Tukey test. Group 2 had a significantly lower baseline BG on Days 5, 8 and 12, with the change in BG on Days 3 and 5 significantly less than Group 1 ($p < 0.05$). There were no significant changes for Group 3 compared to Group 1 ($p > 0.05$). Analyzing data over weeks 1 and 2 showed that baseline BG for Group 2 was significantly lower than Group 1 over both weeks and the change in BG in week 1 was significantly lower than Group 1 ($p < 0.05$). For Group 3 a significant decrease in mean baseline BG compared to Group 1 occurred in week 1 ($p < 0.05$). Repeated EA application using Zhongwan/Guanyuan acupoints was effective in lowering baseline BG and modulating the change in BG in diabetic animals.
Keywords: electroacupuncture; blood glucose; diabetes; rat; male

Tendinopathies: Photobiomodulation Based Therapy

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Abstract
Photobiomodulation via laser irradiation of tissue may be beneficial in treating Achilles tendinopathy. Controversy exists over laser parameters and dose, especially irradiance and the 100mW/cm^2 limit set for Achilles tendons. The optimum dose has yet to be defined. The aim of this work was to assess the effectiveness of a laser device delivering irradiance above 100mW/cm^2 as an adjunct to an eccentric exercise regime for Achilles tendinopathy. A double blind RCT, groups; 1(Exercise + placebo Laser), 2(Exercise + active Laser). The primary end-point was at 12 weeks; the main outcome measure was the Victorian Institute of Sports Assessment-Achilles Questionnaire. Forty participants 18–65 years with a diagnosis of Achilles tendinopathy and who had not had treatment for the condition within the last 3 months, were randomised into the two groups. Laser or placebo was administered twice per week for the first 4 weeks prior to a supervised exercise session with a physiotherapist. The exercise regime was continued unsupervised for a further 8 weeks. Analysis was based on ANCOVA with baseline scores as the covariate on an intention to treat basis. Missing data was replaced using the multiple imputation method. There was no difference between groups at baseline, and both groups significantly improved from baseline to 12 weeks. The between group difference on VISA-A at 12 weeks was statistically significant in favour of the Laser group, (11.34; 95%CI, 3.03–19.64; $p = 0.002$). Eight treatments of laser therapy as an adjunct to an eccentric exercise regime provide superior results compared to exercise alone.
Keywords: exercise compliance; laser therapy; dose-response; Achilles; VISA-A

Ethics of CAM

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Abstract
The use of CAM has steadily increased over the last few decades. This has stimulated much discussion, particularly around the scientific evidence of effectiveness of CAM therapies. Mainstream clinicians and ethicists often take the position that offering or referring to non-evidenced CAM treatments equates to unethical practice. However, this judgment lacks regard for the values, preferences and experiences of patients and practitioners, which are undeniably of ethical significance. This presentation looks at how the ethics of CAM need to be re-framed to take into account the subjective human aspects that are neglected by a singular focus on scientific evidence.